

Remarks

Favorable reconsideration of this application is requested in view of the following remarks. For the reasons set forth below, Applicant respectfully submits that the claimed invention is allowable over the cited references.

The non-final Office Action dated October 6, 2005, indicated that claims 1, 2, 3, 7, 8, 9, 13, 14, 15 and 19 stand rejected under 35 U.S.C. § 103(a) over Nebriggic *et al.* (U.S. Patent No. 6,370,046) in view of Baumgartner *et al.* (U.S. Patent No. 5,142,435); claims 4, 5, 10, 11, 16 and 17 stand rejected under 35 U.S.C. § 103(a) over Nebriggic *et al.* in view of Hawkes (U.S. Patent No. 5,808,883); and claims 6, 12 and 18 stand rejected under 35 U.S.C. § 103(a) over Nebriggic *et al.* in view of Baba (U.S. Patent No. 6,335,577) .

With respect to the rejections of claims 1, 7, 13 and 19 under 35 U.S.C. § 103(a) over the Nebriggic '046 reference in view of the Baumgartner '435 reference, Applicant respectfully traverses the rejections. The Office Action fails to show how the asserted combination of references teaches the claimed invention on a limitation-by-limitation basis or when considering the invention "as a whole" (35 U.S.C. §103(a)), and fails to provide any evidence whatsoever that the skilled artisan would be led by the prior art to implement the asserted combination of teachings.

At a general level, an aspect of the claimed invention is directed to a protection circuit having three particular circuits. Using claim 1 as a representative claim for each of the independent claims, these circuits include a particular control circuit, a particular fault detection circuit and a particular precharge driver circuit. The Office Action acknowledges that the Nebriggic '046 reference does not disclose any form of a precharge driver circuit, and Applicant is unable to find any reference to "fault detection" in the cited passage and figure of the Nebriggic '046 reference. While the Office Action asserts that the Nebriggic '046 reference teaches a fault detection circuit by way of elements 50 and 56 of Fig. 3 and Col. 11, lines 48-57, such an interpretation seems illogical and there is no explanation of this interpretation in the Office Action. At best, the Office Action attempts to present evidence of correspondence only for a control circuit but in another reference -- the Baumgartner '435 reference. The Office Action fails to cite any evidence in the prior art that the skilled artisan would be led to use the control circuit from the Baumgartner '435 reference in connection with the cited teachings of the Nebriggic '046 reference.

Accordingly, the basic tenets for maintaining a §103 rejection are not present, because the Office Action fails to present correspondence to the claim invention, and fails to present evidence of motivation for the asserted combination of teachings. As set forth in MPEP § 2143.01, obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. Thus, "[t]he test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In this instance, the Office Action merely alleges that the combination of cited teachings could be useful to solve a particular problem, but with no explanation of or citation to where these references may have identified this problem and where these references suggest that the problem be solved as suggested by the Office Action. Such arguments are not evidence of motivation as required in MPEP § 2143.01. Therefore, Applicant submits that the rejection is improper and should be removed.

With specific reference to the Office Action's apparent assertion that the circuit of the Nebrigg '046 reference for regulating voltage is also a fault detection circuit (citing Col. 12, lines 1-11), Applicant disagrees. This teaching, however, is directed to supplying additional voltage to a load capacitor C_L for the purpose of maintaining an optimum state of charge, and there is no related discussion of detecting a fault. Applicant fails to see how a circuit for regulating a voltage corresponds to a fault detection circuit. In this pertinent field of electronic circuits, a skilled person would recognize that a fault detection circuit involves a fault that would result, for example, in a short circuit, an excess amount of current being drawn, unacceptable power dissipation or similar issues and conditions. Another example of a fault is a short in a circuit with the potential to cause high current draw.

In contrast, the circuit asserted by the Office Action compares a voltage V_{out} to another voltage V_{ref} for the purposes of voltage regulation. Thus, the Office Action appears to assert that fault detection is the result of any comparison of two voltages, regardless of the purpose for the comparison. Applicant submits that while fault detection can be accomplished by a comparison of voltages, not all comparisons of

voltages detect faults. For example, the cited circuit regulates an output voltage using a feedback loop and is unrelated to shorting, excess current draw, unacceptable power dissipation or similar issues associated with faults. Accordingly, Applicant submits that the circuit of the Nebrigic '046 reference is not a fault detection circuit.

The Office Action also asserts, by citing Fig. 1 element 145, that the Baumgartner reference teaches a circuit responsive to a fault detect signal. Applicant fails to see any fault detect signal component related to element 145. The Baumgartner reference identifies the voltage at element 145 and switch 130 as being open or closed, but this teaching does not correspond to a fault detection signal because, by itself, the state of a switch is not a fault indicator. For example, Baumgartner teaches that when capacitor 125 has little or no charge arcing may occur if switch 155 is closed, and that if capacitor 125 has sufficient charge or if switch 155 is already closed, no such arcing would occur (*See, e.g.*, Col. 4, Lines 52-57). Thus, whether switch 130 is closed is not indicative of whether arcing would occur at switch 155 because: 1) switch 155 and 130 can both be at the closed position; and 2) capacitor 136 may have sufficient charge at the same time switch 130 is closed. Applicant submits that because the signal of 145 is only indicative of the state (open or closed) of switch 130, and because switch 130's state is independent of any potential fault condition, the signal is not a fault detection signal. Accordingly, Applicant submits that the Office Action fails to show where Baumgartner teaches providing a fault detection signal.

With respect to claim 19, Applicant invokes the interpretation mandated by 35 U.S.C. §112(6), and submits that at least one significant difference is the structure/means associated with the function of monitoring at least one of the floating power devices and the load for detecting a fault. This structure/means is depicted and discussed in various embodiments as circuit 33 (*e.g.*, depicted in one example form in FIG. 4 and depicted in a more specific example form in FIG. 6). This circuit 33 corresponds to the structure/means associated with the function of monitoring at least one of the floating power devices and the load for detecting a fault, and there is no equivalent structure present in the asserted prior art. Therefore, as indicated in the MPEP, claim 19 should be deemed as allowed.

Without a presentation of correspondence to each of the claimed limitations and/or evidence of motivation to support any of the §103 rejections, the prior art rejections cannot

be maintained. Applicant submits that each of the claims is patentably distinguishable over the Nebrigg reference for the reasons discussed above, no secondary reference is being used to overcome any deficient teaching in connection therewith, and there is no evidence of motivation to support any of the §103 rejections; therefore, each of the §103 rejections is overcome and Applicant accordingly requests that the rejections be withdrawn.

Applicant now turns to the specific rejections of the dependent claims.

Applicant first submits that in view of their dependency on the above-discussed independent claims, each of the dependent should be allowed because they include all the limitations of the claims from which they depend.

With specific reference to the rejections of claims 2, 3, 8, 9, 14, and 15 under 35 U.S.C. § 103(a) over the Nebrigg reference in view of the Baumgartner reference, Applicant respectfully traverses. The Office Action fails to show correspondence for each and every of the claimed limitations. For example, claim 8 teaches a float level shift circuit for shifting a fault detection signal. The Office Action cited passage teaches that switch driver may be required to level shift in order to drive MOSFET switches. Applicant is unable to find any reference to level shifting a fault detection signal.

With specific reference to the rejections under 35 U.S.C. § 103(a) over Nebrigg in view of Hawkes of claims 4, 5, 10, 11, 16, and 17 Applicant respectfully traverses. Applicant submits that claims 4 and 5 are dependents of claim 1, that claims 10 and 11 are dependents of claim 7, and that claims 16 and 17 are dependents of claim 13. Independent claims 1, 7, and 13 should be in condition for allowance as discussed above. As state above, Nebrigg fails to teach the fault detection circuit of claims 1, 7, and 13. The Office Action does not assert, and the Applicant is unable to find any teaching of a fault detection circuit in Hawkes. Thus, claims 4, 5, 10, 11, 16, and 17 should be in condition for allowance because they include all the limitations of the claims they depend from. Accordingly, Applicant respectfully requests that the rejections be withdrawn.

With specific reference to the rejections under 35 U.S.C. § 103(a) over Nebrigg in view of Baba of claims 6, 12 and 18, Applicant respectfully traverses the rejections. Applicant submits that Baba teaches away from the modification suggested by the Office Action, and as a result, the Office Action appears to rely on assertions that are inconsistent with each other. For example, the Office action first asserts that the reservoir capacitor taught by Nebrigg corresponds to the Applicant's claimed floating power limitation. The

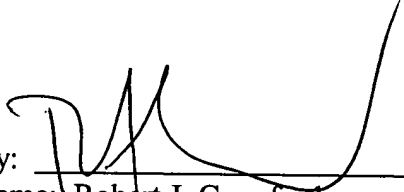
Office Action also asserts that Baba teaches a temperature sensor for temperature protection of a circuit. Applicant submits that the reservoir capacitor of Nebrigic is part of a charge pump power converter (*see, e.g.,* the Abstract). In direct conflict, Baba teaches the use of a power supply control unit with a temperature sensor for the purpose of removing the need for a charge pump circuit. (*see, e.g.,* Col. 2, Lines 40-44). Thus, Baba teaches away from the attempted modification because Baba's stated objective is to remove a charge pump circuit (*e.g.,* the reservoir capacitor taught by Nebrigic) and the Office Action's attempted modification necessarily contains a charge pump. Applicant submits that under MPEP § 2145, the rejections under 35 U.S.C. § 103(a) are improper because Baba teaches away from the proposed modification.

Moreover, Applicant submits that claim 6 is dependent of claim 1, that claim 12 is dependent of claim 7, and that claim 18 is dependent of claim 13. Claims 1, 7 and 13 should be in condition for allowance as discussed above. Therefore, claims 6, 12, and 18 also should be in condition for allowance because they include all the limitations of the claims they depend from. Accordingly, Applicant respectfully requests that the rejections be withdrawn.

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Applicant respectfully requests that the rejections be withdrawn. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the senior patent counsel overseeing the application file, Adam L. Stroud, of Philips Corporation at (408) 474-9064.

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